AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application:

1. (Currently amended) A ~~Method~~ method for ~~the determination of~~ determining the free fraction of a substance comprising

(a) ~~incubation of~~ incubating the substance with a suspension of particles~~, other than erythrocytes,~~ having a lipophilic surface~~,~~ in a ~~substantially~~ protein-free aqueous medium, ~~for the determination of the distribution of the substance between the particles and said substantially protein free medium~~ wherein the particles and the medium are erythrocyte-free;

(b) determining the distribution of the substance between the particles and said protein free medium in step (a);

~~(b)~~(c) ~~incubation of~~ incubating the substance with a suspension of particles, ~~other than erythrocytes,~~ having a lipophilic surface~~,~~ in a protein-containing aqueous medium, ~~for the determination of the distribution of the substance between the particles and said protein-containing aqueous medium~~ wherein the particles and the medium are erythrocyte-free;

(d) determining the distribution of the substance between the particles and said protein-containing aqueous medium in step (c);

~~(c)~~(e) ~~determination of~~ determining the free fraction of the substance from the distributions determined under steps ~~(a)~~(b) and ~~(b)~~(d).

2. (Currently amended) The ~~Method~~ method of claim 1, wherein said ~~suspension of~~ particles ~~is~~ are selected from a group consisting of ~~suspensions comprising~~

~~(a)~~ ~~a suspension of~~ particles having a solid core~~;~~ ,

~~(b)~~ ~~a suspension of~~ particles having a solid core comprising a silica bead~~;~~ , and

~~(c)~~ ~~a suspension of~~ Transil® particles.

3. (Previously presented) The ~~Method~~ method of claim 1 or 2, wherein the protein-containing aqueous medium is plasma.

4. (Currently amended) The ~~Method~~ method of ~~any of claims 1 to 3~~ claim 1 or 2, wherein the ~~substantially~~ protein-free aqueous medium is a buffer solution.

5. (Currently amended) The ~~Method~~ method of ~~any of claims 1 to 4~~ claim 1 or 2, wherein ~~said incubations of~~ said substance is incubated with said suspensions of particles ~~is~~ on a plate having multiple cavities or on a 96-well-plate.

6. (Currently amended) The ~~Method~~ method of ~~any of claims 1 to 4~~ claim 2, wherein said particles have ~~the solid core is~~ a ferromagnetic solid core.

7. (Currently amended) A ~~Method~~ method for ~~the determination of~~ determining the relative free fraction of a substance in a first species in relation to the free fraction of the same substance in a second species comprising

(a) determining the membrane affinity of said substance in plasma (MA_{plasma}) of ~~said substance for~~ said first species,

(b) determining the membrane affinity of said substance in plasma (MA_{plasma}) of ~~said substance for~~ said second species,

(c) determining the relative free fraction from the results determined under the steps (a) and (b);

provided that the membrane affinity of said substance in plasma (MA_{plasma}) of said first species and said second species is determined in an erythrocyte-free environment.

8. (Withdrawn) A kit for use in any of the methods of claims 1 to 7, comprising a plate having multiple cavities, a buffer solution, plasma, and particles selected from a group of particles comprising

(a) particles having a solid core;

(b) particles having a solid core which is a silica bead; and

(c) Transil® particles.

9. (Withdrawn) The kit of claim 8, comprising plasma of two different species.

10. (Withdrawn) A kit of claim 8 or 9, wherein said specific amounts of particles are placed within said cavities of said plate.

11. (New) The method of claim 2, wherein said particles have a solid core coated with lipophilic drugs.